

S/126/63/015/002/025/033
E193/E383

AUTHORS: Vasil'yev, D.M. and Plakhtiy, V.P.
TITLE: The effect of texture on the intensity of X-ray diffraction lines and the character of deformation of low-carbon steels in the yield-ledge range
PERIODICAL: Fizika metallov i metallovedeniye, v. 15, no. 2, 1963, 297 - 300

TEXT: The object of the present investigation was to obtain data on the effect of texture on the intensity of X-ray diffraction from steel subjected slight (1 to 2%) plastic deformation. The experiments were conducted on low-carbon steel specimens, hardened at 800 °C and tempered at 550 °C and then deformed plastically both in tension and in compression. Cylindrical specimens for X-ray measurements were cut from the test pieces in the direction normal to the direction of the applied stress. The degree of perfection of texture, $0 \leq k \leq 1$, was calculated from:

$$k = \frac{I_{\max} - I_{\min}}{I_{\max}}$$

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E195/E383

The effect of

where I_{\max} and I_{\min} are the maximum and minimum values of the intensity of the (220) lines in the $0 \leq \phi \leq 90^\circ$ range. The results are reproduced in Fig. 5, where k is plotted against the degree (ϵ , %) of plastic deformation in tension (circles) and compression (dots). It will be seen that the formation of texture in the specimens studied had already occurred at the end of the yield range (after deformation of about 2% only). This indicates that the theory of the grain-boundary flow mechanism of yield cannot be correct. The formation of texture immediately after the end of the yield stage of deformation indicates that deformation takes place by intragranular slip. There are 3 figures and 1 table.

ASSOCIATION: Leningradskiy politekhnicheskii institut im.
M.I. Kalinina (Leningrad Polytechnical Institute
im. M.I. Kalinin)

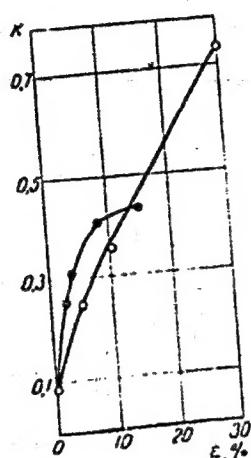
SUBMITTED: June 12, 1962

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E193/E383

The effect of

Fig. 5:



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VASIL'YEV, D.M.; PLAKHTIY, V.P.; CHZHU TSZIN'-PEN [Chu Chin-p'eng]

X-ray study of the metal fatigue process. Fiz.met.i metalloved.
15 no.4:605-611 Ap '63. (MIRA 16:6)

1. Leningradskiy politekhnicheskoy institut imeni M.I.Kalinina.
(Steel--Fatigue)

(X rays--Industrial applications)

L 14299-63

EWP(q)/EWT(m)/BDS

AFETC/ASD JD

S/0126/63/015/004/0605/0611

ACCESSION NR: AP3000104

AUTHORS: Vasil'yev, D. M.; Plakhtiy, V. P.; Chi Ch'in P'engTITLE: X-ray investigation of metal fatigue processSOURCE: Fizika metallov i metallovedeniye, v. 15, no. 4, 1963, 605-611

TOPIC TAGS: metal fatigue, x-ray investigation

ABSTRACT: Soft steel samples were subjected to rhythmic tension-compression stresses in a pulsator. The intensity variation of the line (220) at loads larger and smaller than the fatigue limit was studied. These experimental conditions caused the development of an axial texture only. The relation between the texture development and the intensity of the (220) line are illustrated graphically. The authors conclude that steel samples with a weak initial tension texture develop a strong tension texture. This process starts with loads 10% smaller than the fatigue limit. The magnitude of the intensity variation and its sign depend on the experimental procedure and on the initial texture. Apparently the variation in the x-ray line intensities can be used as a rough approximation of the danger point in metal fatigue. The plastic deformation under a cyclic load results in the development of a strong texture, equivalent to a 10% order tension. This process is not

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L 14299-63

• ACCESSION NR: AP3000104

associated with the macroscopic changes in the sample or with the distortion of separate grain contours. Experiments in which the texture influence was excluded showed that the effect of extinction and of submicrodistortion can be neglected. The authors express their appreciation to B. I. Smirnov for his participation in the discussion concerning the experimental materials and to P. O. Bol'shakov for his help with the experiments. N. N. Davidenkov (deceased) participated in the discussion of the experimental materials. Orig. art. has: 6 figures and 1 formula.

ASSOCIATION: Leningradskiy politekhnicheskii institut im. M. I. Kalinina (Leningrad Polytechnic Institute)

SUBMITTED: 12Jun62

DATE ACQ: 12Jun63

ENCL: 00

SUB CODE: PH

NO REF SOV: 014

OTHER: 002

Card 2/2

VASIL'YEV, D.M.; GLAZUNOVA, V.K.

X-ray investigation of residual stresses in tin coatings.
Izv. vys. ucheb. zav.; Chern. met. 8 no.9:151-154 '65.
(MIRA 16:9)

1. Leningradskiy politekhnicheskii institut.

VASIL'YEV, D.M.

Methods for radiographic measurement of stresses. Zav. lab. 31 no.8:
972-978 '65. (MIRA 18:9)

VASIL'YEV, D.N.

Chemical Abstracts
May 25, 1954
Cellulose and Paper

6
Paper for vulcanized fiber. D. N. Vasil'ev. *Bumash. Prom.* 23, No. 5, 32-5 (1950).—Manuf. of paper suitable for the prepn. of vulcanized fiber is discussed in detail. Raw materials necessary for the process, their compn., and their purification are described.
Elizabeth Barabash

VASIL'YEV, D.N., inzh.

New design of heat regenerator systems. Bum. prom. 38 no.11:28
N '63. (MIRA 17:1)

1. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy
tsellyuloznoy i bumazhnoy promyshlennosti.

ACC NR: AP6015713 (A,N) SOURCE CODE: UR/4013/66/000/009/0126/0126

INVENTOR: Vasil'yev, D. P.; Vitozhents, E. V.; Chernetsov, I. B.; Berlin, V. B.;
Mosenkov, V. N.

ORG: None

TITLE: Direct rpm controller for low-power gas turbine engines. Class 46, No. 181448 [announced by the Central Scientific Research and Design Institute of Vehicle and Stationary Engine Fuel Equipment (Tsentral'nyy nauchno-issledovatel'skiy i konstruktorskiy institut toplivnoy apparatury avtotraktornykh i statsionarnykh dvigateley)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 126

TOPIC TAGS: speed regulator, gas turbine engine

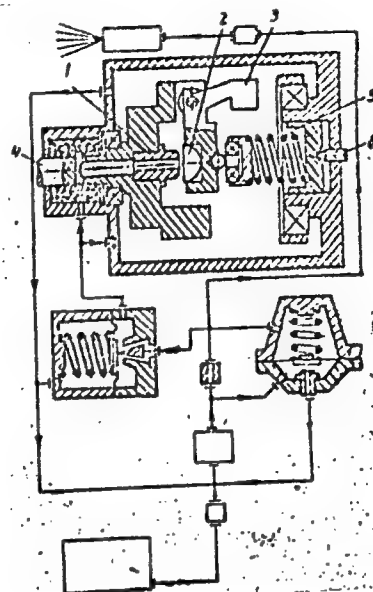
ABSTRACT: This Author's Certificate introduces: 1. A direct rpm controller for low-power gas turbine engines. The unit contains an actuating mechanism made in the form of a nozzle which interacts with a flat valve located in the arm of a balanced spring-loaded centrifugal weight mounted on the cross connection of the power shaft. Construction is simplified and friction is reduced by locating the nozzle and the fuel channel in the power shaft. 2. A modification of this device which may be adjusted during engine operation by using a spring which acts on a lever and is equipped with a screw for varying tension.

UDC; 621.438-531.6-552.9

Card 1/2

ACC NR: AP6015713

1—nozzle; 2—flat valve; 3—weight;
4—power shaft; 5—spring; 6—screw



SUB CODE: 13, 21/ SUBM DATE: 04May64

Card 2/2

VASIL'YEV, D. S., Cand Agr Sci -- (diss) "Ambrosia Artemisiaefolia
and Measures for Combatting It in Krasnodarskiy Kray." Krasnodar,
1957. 15 pp (Min of Agriculture USSR, Kuban Agricultural Inst),
110 copies (KL, 47-57, 89)

48

VASIL'EV, D. S., Cand Geol-Min Sci -- (diss) "Influence of neotectonic movements on the development of abrasion and petroleum gas manifestation in the northeastern Black Sea region." Sochi, 1960. 33 pp; 2 pages of tables; (Rostov State Univ); 150 copies; price not given; (KL, 17-60, 144)

PANCHENKO, A. Ya., kand.sel'skokhozyaystvennykh nauk; VASIL'YEV, D.S.,
kand.sel'skokhozyaystvennykh nauk

Science offers inexhaustible possibilities for increased pro-
duction. Zemledelie 23 no.4:33-39 Ap '61. (MIRA 14:3)
(Agricultural research)

VASIL'YEV, D.S., Cand Geol-Min Sci — (diss) "Abrasion of ^{the} Black
Sea coast of ^{the} Caucasus and evaluation of the petroleum and gas
bearing ~~prospectives~~ ^{prospects} of this region." Sochi, 1959. 27 pp with
~~diagrams~~ ^{diagrams}; 2 sheets of tables (Rostov State U). 150 copies
(IL, 39-59, 102)

20

N

USSR / Weeds and Weed Control.

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 1933

Author : Vasil'yev, D. S.

Inst : Not given

Title : Methods of Controlling Common Ragweed

Orig Pub : S.-kh. Kubani. Inform. byul., 1957, No 1, 38-48

Abstract : Presowing tillage and the cutting of the mass shoots of these weeds drastically reduced contamination of sunflowers and corn by ragweed. A dosage of 2 kg/hectare of 2,4-D, applied before corn sprouts appeared, reduced ragweed contamination on the fields by 87.6%, and the corn yield increased 6.5 centner/hectare. The best dosage for spraying of the corn sprouts was 0.8 kg/hectare. Higher doses of 2,4-D had an adverse effect on the corn and lowered the

Card 1/2

3

USSR / Woods and Wood Control.

N

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 1933

harvest. Burning the left-over stalks after reaping the badly contaminated cultivated plants was an extremely good prophylactic measure. Spring occupancy of partially fallow land was an effective means of coping with contamination of the soil with ragweed seeds. Ragweed was suppressed best of all with 2,4-D on untreated lands. For its complete suppression 2 kg/hectare were sufficient. Later on (from the stage of 2-3 pairs of leaves), resistance of the plants to the herbicide increased, and the killing dosages were increased to 2.5 kg/hectare. -- L. D. Stonov

Card 2/2

USSR/Weeds and Their Control.

N.

Abs Jour : Ref Zhur - Biol., No 15, 1953, 60461

Author : Vasil'yev, D.S.

Inst : All-Union Scientific Research Institute of Oil and Essential Oil Bearing Crops.

Title : Weed Control in the Pre-Sowing Period.

Orig Pub : Byul. nauchno-tekhn. inform. Vses. n.-i. in-t maslichn. i efiromaslichn. kul'tur, 1957, No 3, 12-14.

Abstract : Experiments made at the All-Union Scientific Research Institute of Oil and Essential Oil Bearing crops and in the kolkhozes of the Adygey Autonomous Oblast' have demonstrated that when earlier sowing dates are used for sunflowers (the last third of April) and corn (the second third of May), and the fields are cultivated before sowing, the hibernating weeds (pan-weed, *Thlaspi arven-*
so)

Card 1/2

USSR/Weeds and Their Control.

N.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 68461

tares, blue burr (*Lappula eclimata*)) and spring weeds (wild turnip, black bindweed, bearded oat) are destroyed, the yield of sunflower seed increases by 2.8 centners per hectare, that of corn seed by 7.2 centners/hectare, and the labor expenditure on weeding is reduced. -- V.A. Astaf'yeva

Card 2/2

- 4 -

VASIL'YEV D.S.

USSR/Weeds and Weed Control

11

Abstr Jour : Ref Zhur - Biol., No 9, 1958, No 39611

Author : Knott S.A., Vasil'ev D.S.

Inst : Institute of Olive and Olive-Essential oil-bearing Crops of
the Adygey Autonomous Oblast

Title : Control of Wormwood-Leaved Ragweed by Chemical Method

Orig Pub : Kukuruz, 1957, No 6, 43-44

Abstract : Field experiments showed that the spraying of corn sowings
by soda salt 2,4-D in doses 2 kg/ha six days before the ap-
pearance of sprouts or 0.6 - 0.8 kg after this appearance des-
troys 76-95 percent of the malignant wormwood-leaved ragweed,
thus increasing the yield of corn considerably. This study
was conducted in 1954-1956 by the Institute of olive and
olive-essential oil-bearing crops in the kolkhozes of the
Adygeysh autonomous oblast. -- N.N. Sokolov.

Card : 1/1

COUNTRY : USSR N
 CATEGORY : Weeds and Weed Control.
 ABS. JOUR. : RZhBiol., No. 3, 1959, No. 11209
 AUTHOR : Vasil'yev, D. S.
 INST. : ~~Scientific Institute of Agriculture~~
 TITLE : Common Ragweed (*Ambrosia artemisiifolia*) in Krasnodar Kray.
 ORIG. PUB. : Vestn. s.-kh. nauki, 1953, No. 5, 135-136.
 ABSTRACT : In the experiments carried out during 1954-1957, the ripe seeds of the common ragweed (*Ambrosia artemisiifolia*) were kept in the granary, in the laboratory and in the soil after having been collected in October. After definite intervals of time, the seeds were sprouted while exposed to light at 18-22°. In November and December, the seeds had not yet germinated regardless of the conditions of their storage. In January, the seeds kept in the soil began to germinate (10-12%); in the second of February their germination reached 13-20%.
 CARD: 1/3

COUNTRY :
CATEGORY :

ABS. JOUR. : RZhBiol., No. 1959, No. 11209

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : In the first ten days of April, the germination rose to 74-88% and by the end of the month - to 95% while at the same time the vigor of the sprouting of the seeds rose considerably. In the soil, favorable conditions are combined for the post-harvest completion of the maturation of the seeds and their preparation for sprouting. In the southern and central regions of Krasnodar Kray, the sowing of sunflowers on the weed-contaminated fields should be done in the third ten days of April and the the planting of corn - in the second third of May after

CARD: 2/3

COUNTRY :
CATEGORY :

ABS. JOUR. : EzhBiol., No. 1959, No. 11209

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : the destruction of the mass sprouting of the ragweed and
other early weeds by pre-planting cultivations. -- L.
D. Stonov

CARD: 3/3

VASIL'YEV, D.S., nauchnyy sotrudnik; TIKHONOV, O.I.

Ambrosia artemisiaefolia and its control in the Kuban. Zashch.
rast. ot vred. i bol. 4 no.2:43-45 Mr-Apr '59. (MIRA 16:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh i
efiromaslichnykh kul'tur (for Vasil'yev). 2. Nachal'nik Krasnodarskoy
karantinnoy inspektsii (for Tikhonov).
(Kuban—Ragweed) (Kuban—Weed control)

VASIL'YEV, D.S.

Some data on the biology of *Ambrosia artemisiifolia* L. Bot.
zhur. 44 no.6:843-846 Ja '59. (MIRA 12:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh
i efiromaslichnykh kul'tur, Krasnodar.
(Ragweed)

SUSLOV, V.M., otv.red.; VASIL'YEV, D.S., red.; GEYDEL'BERG, Ye.Z., red.;
IGNAT'YEV, B.K., red.; MOSKALENKO, V.I., red.; PANCHENKO, A.Ya.,
red.; UMEN, D.P., red.; TULIN, N.S., red.; ANTONOVA, N.M.,
khudozh.-tekhn.red.

[Collection of scientific research papers on oilseed and aromatic
plants] Sbornik nauchno-issledovatel'skikh rabot po maslichnym
i efiromaslichnym kul'turam. Moskva, Izd-vo M-va sel'.khoz.SSSR,
1960. 284 p. (MIRA 14:3)

1. Krasnodar. Vsesoyuznyy nauchno-issledovatel'skiy institut
maslichnykh i efiromaslichnykh kul'tur.
(Oilseed plants) (Aromatic plants)

VASIL'YEV, D.S., kand.sel'khoz.nauk; ANNENKOVA, G.N., nauchnyy sotr.;
BARTENEV, V.A., nauchnyy sotr.; KOSTSOV, P.A.

Using 2, 4-D for controlling offset weeds in fall-plowed fields.
Zemledelie 23 no.8:64-66 Ag '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh i
efiromaslichnykh kul'tur (for Vasil'yev, Annenkova, Bartenev).
2. Glavnyy agronom opytno-issledovatel'skogo khosyaystva
"Berezanskoye" (for Kostsov).
(Weed control) (2, 4-D)

PUSTOVOYT, V.S., akademik, red.; SUSLOV, V.M., kand. ekon. nauk, otv. red.; ALEKSEYEVA, Ye.I., , kand. sel'khoz. nauk, red.; BUZINOV, P.A., red.; VASIL'YEV, D.S., kand. sel'khoz. nauk, red.; VOSKRESENSKAYA, G.S., red.; GUNDAYEV, A.I., red.; IGNAT'YEV, B.K., kand. sel'khoz. nauk, red.; MAKSIMOVA, A.Ya., red.; MOSKALENKO, V.I., red.; PANCHENKO, A.Ya., red.; TIKHONOV, O.I., red.; SHPOTA, V.I., kand. sel'khoz. nauk, red.; MONOVA, Ye.S., red.; LAPSHINA, O.V., red.

[Oilseed and aromatic crops; transactions for 1912-1926]
Maslichnye i efiromaslichnye kul'tury; trudy za 1912-1962 gg. Pod obshchei red. V.S.Pustovoita. Moskva, Sel'khozizdat, 1963. 575 p. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh i efiromaslichnykh kul'tur. 2. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Pustovoyt). 3. Direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta maslichnykh i efiromaslichnykh kul'tur (for Suslov).

VASIL'YEV, D.S., kand. sel'skokhoz. nauk; ANNENKOVA, G.N., nauchnyy sotrudnik

Chemical weed control of coriander fields. Zashch. rast. ot vred.
1 bol. 8 no.4:25 Ap '63. (MIRA 16:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh i
efiromaslichnykh kul'tur Krasnodar.

(Krasnodar Territory—Coriander)
(Krasnodar Territory—Weed control)

VASIL'YEV, D.S., kand. sel'skokhoz. nauk

Precision sowing method for sunflowers. Zemledelie 26 no.2:
72-75 F '64. (MIRA 17:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh i
efiromashlichnykh kul'tur.

VASIL'YEV, D.S., kand. sel'skokhoz. nauk

Preharvest defoliation of castor bean. Zemledelie 26 no.2:79-80
Ag '64. 'MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh i
efiromaslichnykh kul'tur.

VASIL'YEV, D. T., Engineer

"Chemical Treatment of Cutting Tools,"
Stanki i Instrument, 10, No. 12, 1939.

Report U-1505, 4 Oct 1951

VASIL'YEV, D. T.

Candidate of Technical Sciences

"New Methods of Machining Metals Instead of Milling", Stanki I Instrument, 14,
No. 3, 1943.

BR-52059019.

VASIL'YEV, D. T.

Candidate of Technical Sciences

"New Methods of Thread Cutting." Stanki I Instrument Vol. 15, No. 6, 1944

BR 52059019

VASIL'YEV, D. T.

Candidate of Technical Sciences

"A High-Production Method of Precision Thread Cutting." Stanki I Instrument
Vol. 15, No. 12, 1944

BR 52059019

VASIL'YEV, D.T.

Candidate of Technical Sciences

"Conditions for Productive Cutting of Precision Threads,"
Stanki I Instrument, 16, Nos. 4-5, 1945

BR-52059019

VASIL'YEV, D. T.

Vasil'ev, D T

Центрирующая резьбоарезная головка. Москва, Гос.
научно-техн. изд-во машиностроит. лит-ры, 1946

30, 14 p. illus. 22 cm

At head of title: Оправанном.

Errata slip inserted.

Bibliography: p. 130.

Centering Threading Tool.

1. Screw-cutting machines.

Title transliterated: Tsentrirushchaya
rez'boarезnaya golovka.

TJ1222.V3

Library of Congress

51-23612

(5)

VASIL'YEV, D. T.

Candidate of Technical Sciences

"Unutilized Reserves in Thread Cutting"
Stanki I Instrument, 17, No. 7-8, 1946

BR-52059019

1ST AND 2ND CODES										3RD AND 4TH CODES									
PROCESSES AND PROPERTIES INDEX																			
<p>B</p> <p>5</p> <p>Technology of Electric-Spark Cutting of Metals. D. T. Vasil'ev, Henry Bratcher, Translation No. 2490, 25 pages. From <i>Stanki i Instrument</i> (Machine Tools and Equipment), v. 18, no. 3, 1947, p. 1-8.</p> <p>Considers ways in which the efficiency of the above process can be improved over the efficiency of mechanical cutting processes. Discusses condenser charge and discharge time, energy of discharge, productivity and power requirements, and other methods for increasing productivity.</p>																			
ABB-5LA METALLURGICAL LITERATURE CLASSIFICATION																			
FROM SYMBOL										FROM SYMBOL									
SYMBOL NO.										SYMBOL ONE ONLY									
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20										1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20									

VASIL'YEV, D.T.

Forces acting on the cutting surfaces of a tool. Stan.1 instr. 25
no.4:1-5 Ap '54. (MLRA 7:6)
(Cutting tools)

VA L 124, 125
USER/ Engineering - Machining metals

Card 1/1 Pub. 128 - 31/35

Authors : Larin, M. N., Dr., Tech. Sc., Prof.; Grudov, P. P., Dr. Tech. Sc., Docent;
and Vasil'yev, D. T., Cand. Tech. Sc.

Title : The cutting of metals

Periodical : Vest. mash. 35/3, 88 - 90, Mar 1955

Abstract : A review is presented of the book, "The Cutting of Metals," by M. I. Klushin, published in 1953 by the State Publishing Office for Machine Construction Literature, and containing 428 pages. A number of shortcomings are pointed out but on the whole the book is rated as a valuable textbook for students of the subject.

Institution :

Submitted :

IAKUSHEV, Aleksandr Ivanovich; VASIL'YEV, D.T., kandidat tekhnicheskikh nauk, retsentsent; MOZHEIKO, A.F., inzhener, retsentsent; ROZENBLIT, Ya.M., inzhener, redaktor; PETROVA, I.A., redaktor; ZUBAKIN, I.M., tekhnicheskii redaktor.

[Influence of the manufacturing process and basic threading factors on the durability of threaded joints] Vliianie tekhnologii izgotovleniya i osnovnykh parametrov rez'by na prochnost' rez'bovykh soedinenii. Moskva, Gos.izd-vo obor.promyshl., 1956. 188 p. (MLRA 9:5)
(Screw threads)

VASIL'YEV, D. T. and FITSNER, L. N.

"Computators for the Determination of the Most Suitable Sequence of Cuts in Metal-Working Industry."

report presented at the Conference on Automation and Computation Engineering, Moscow, 5-8 March 1957. Organized by AV Sci. Eng. and Tech. Society for Apparatus Building.

PLANE I BOOK EXPLANATION 307/3791

Sovetskoye po obrabotke zharnoprochnykh splavov, Moscow, 1957.

Obrabotka zharnoprochnykh splavov; [sbornik dokladov...] (Treatment of Heat-Resistant Alloys; Collection of Papers Read at the Conference), Moscow, Izd-vo AN SSSR, 1960. 231 p. 3,500 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR, Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya; Akademiya nauk SSSR, Institut metallurgii. A.A. Baykova. Nauchnyy sovet po problemam zharnoprochnykh splavov.

Resp. Ed.: V.I. Khushin, Academician; Ed. of Publishing House: V.A. Kotov; Tech. Ed.: V.V. Zhurav.

PURPOSE: This book is intended for metallurgists.

COVERAGE: The book consists of thirty papers read at the Conference on the Treatment of Heat-Resistant Alloys held in Moscow by the Committee on Machine-Building Technology, Institute of the Academy of Sciences, Academy of Sciences USSR, in 1957. The papers deal with four principal areas of alloy metallurgy: casting, forming, machining, and welding. The first two areas are discussed especially in connection with their application in the manufacture of turbine blades, heat engines, boilers, reactors, containers for high-temperature media, dies, casting molds, and metal-cutting tools. No personalities are mentioned. Some of the articles are accompanied by references, mainly Soviet.

Protnina, Ye.M. Gas-Shielded Arc Welding of Heat-Resistant Alloys 124

Klimov, G.A., and A.V. Kordvintseva. Welding of Martensitic Steel 131

Guloshnikov, P.I. Resistance Welding of Titanium 138

Parkin, A.V. Two Examples of the Machining of Wear- and Heat-Resistant Alloys 145

Berdnikov, M.I. Machinability of Heat-Resistant Steels and Alloys in Turning, Milling, and Drilling with Carbide Tools 154

Besnikov, A.M. Temperature Field in the Work and in the Tool in Machining Heat-Resistant Steels and Alloys 162

Kurochkin, A.S. Investigation of Some Machinability Factors of K1617 Heat-Resistant Alloy 175

Kravets, A.T. Electric-Pulse Machining of Heat-Resistant Alloys 182

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Gurevich, Ye.L. Machinability of Stainless Steels in Turning, Milling, and Reaming Operations 214

Mironenko, O.V. Cutting of Threads on Parts Made of Heat-Resistant Materials and Titanium Alloys 222

Golubev, S.A. Some Questions Concerning the Machinability of Heat-Resistant Alloys 226

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SOV/112-59-23-48191

Translation from: Referativnyy zhurnal Elektrotekhnika, 1959, Nr 23, pp 131 - 132 (USSR)

AUTHORS: Vasil'yev, D.T., Fitsner, L.N.

TITLE: Computing Device for Determining the Optimum Cutting Conditions

PERIODICAL: V sb.: Avtomat. upravleniye i vychisl. tekhn. Moscow, Mashgiz, 1958, pp 362 - 374

ABSTRACT: A device for determining the optimum cutting conditions for metals is described. Potentiometers P_1 having a special logarithmic winding are connected to an electric circuit for solving the transcendental equations of type $1 = a_1^{b_1} \cdot a_2^{b_2} \cdot a_3^{b_3} \dots a_n^{b_n}$, where a_i , b_i are real values and as unknown can be any value. One end of P_1 is connected to the terminal of the feeding battery and the other end to the middle zero point. To the slide of P_1 the ends of linear potentiometers P'_1 are connected; the other end of P'_1 is connected to the zero point. From P'_1 the voltage through the resistance R_1 is supplied to the summing indicator. The voltage supplied to the indicator is $c_1 = c \alpha_1 \cdot \lg \beta_1$.

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Computing Device for Determining the Optimum Cutting Conditions

where α_1, β_1 are deflections of slides of P_1 and P'_1 potentiometers from the end with the zero potential. It is shown that in the circuit holds the equation:

$$\alpha_1 \lg \beta_1 + \alpha_2 \lg \beta_2 + \alpha_3 \lg \beta_3 + \dots + \alpha_n \lg \beta_n = 0.$$

To find one unknown value α or β , all known data are set and the value sought for is selected on the basis of the zero of indicator. An example of solution of a transcendental equation is analyzed. A table of equations for the optimum cutting conditions is supplied. A description of the design and of the method to protect the indicator from an increased voltage is given. Seven illustrations.

Yu.M.V. H

Card 2/2

VINNIK, L.M.; GRINBERG, R.Ya.; KAMINSKIY, Ya.A.; KLEPIKOV, V.D.; KUZNETSOV, A.M.; KUCHENEV, N.I.; STRUZHESTRAKH, Ye.I.; TISHIN, S.D.; KHARITONOV, A.B.; TSEYTS, I.E.; SHAPIRO, I.I.; SHAPIRO, M.Ya.; ANAN'YAN, V.A., retsenzent; VASIL'YEV, D.T., retsenzent; GORETSKAYA, Z.D., retsenzent; KARTSEV, S.P., retsenzent; KEDROV, S.M., retsenzent; KOMISSARZHEVSKAYA, V.N., retsenzent; KOPERBAKH, B.L., retsenzent; KORBOV, M.M., retsenzent; LEONOV, N.I., retsenzent; LUR'YE, G.B., retsenzent; NOVIKOV, V.F., retsenzent; GAL'TSOV, A.D., red.; VOL'SKIY, V.S., red.; KHISIN, R.I., red.; SEMENOVA, M.M., red. izd-va; MODEL', B.I., tekhn.red.

[Reference book for establishing norms in the manufacture of machinery; in 4 volumes] Spravochnik normirovshchika-mashinostroitelia; v 4 tomakh. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry. Vol.2. [Establishing technical norms for operating machine tools] Tekhnicheskoe normirovanie stanochnykh rabot. Pod red. E.I.Struzhestrakha. 1961. 392 p.

(MIRA 14:8)

(Industrial management) (Machine tools)

S/121/63/006/001/012/014
A004/A126

AUTHOR: Vasil'yev, D.T.

TITLE: Miniature induction pickups with linear characteristics and large working stroke

PERIODICAL: Stanki i instrument, no. 1, 1963, 35 - 37

TEXT: The author describes a number of induction pickups with linear characteristics over a wide range of measuring rod displacement. This type of pickup can be manufactured with practically any working stroke. Thus, e.g., one of them is 10 mm in diameter, 41 mm long and has a working stroke of 3 mm; the linear portion of the characteristic amounts to 90% of the working stroke. These pickups are of the plunger type, simple in design and easy to manufacture. The mechanical part consists only of the friction couple rod - aperture, so that they ensure a reliable operation. The author describes the design features of such pickups having either a hollow or solid armature. A valuable property of induction pickups with linear characteristics is the possibility of reducing the effect of voltage variations in the supply mains on the reading accuracy. In

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Miniature induction pickups with linear

S/121/63/000/001/012/014
A004/A126

many cases, this type of pickup can be supplied from the lighting circuit via an ordinary transformer or a ferrous resonance stabilizer. Using an auxiliary voltage of the same supply source it is easy to obtain zero without noticeable drift. The zero position is displaced by changing the auxiliary voltage magnitude. There are 7 figures.

Card 2/2

DANIYEL'YAN, Arutyum Mkrtichevich, zasl. deyatel' nauki i tekhniki
RSFSR, doktor tekhn. nauk, prof.[deceased]; BOBRIK, Petr
Ivanovich; GUREVICH, Yankel' Leybovich; YEGOROV, Ivan
Sergeyevich; VASIL'YEV, D.T., kand. tekhn.nauk, retsenzent

[Machining heat resistant steels and alloys and high melting
metals] Obrabotka rezaniem zharoprochnykh stalei, splavov i
tugoplavkikh metallov. Moskva, Mashinostroenie, 1965. 306 p.
(MIRA 18:5)

ATABEKOV, G.I.; BELOUSOV, M.M.; BULGAKOV, K.V.; VASIL'YEV, D.V.;
YEGIZAROV, I.V.; ZAKHAROV, S.N.; ZEYLIDZON, Ye.D.; KOSTENKO, M.P.;
MANOYLOV, V.Ye.; VARNEVSKIY, B.I.; RYZHOV, P.I.; SOLOV'YEV, I.I.;
SYROMYATNIKOV, I.A.; FABRIKANT, V.L.; CHERNIN, A.B.; CHERNOBAYEV,
N.V.; FEDOSEYEV, A.M.; SHABADASH, B.I.; SHCHEDRIN, N.N.;
FATEYEV, A.V.

Viktor Ivanovich Ivanov, 1900-1964; an obituary. Elektrichestvo
no.11:89 N '64. (MIRA 18:2)

ATAFTEKOV, G.I.; BASHARIN, A.V.; BOGORODITSKIY, N.P.; BULGAKOV, K.V.;
VASIL'YEV, D.V.; YEGIAZAROV, I.V.; YERMOLIN, N.P.; KOSTENKO, M.P.;
MATKHANOV, P.N.; NOVASH, V.I.; NORNEVSKIY, B.I.; RUTSKIY, A.I.;
RYZHOV, P.I.; SOLOV'YEV, I.I.; SOLODNIKOV, G.S.; SLEPYAN, Ya.Yu.;
SMIROVA, N.V.; TINYAKOV, N.A.; FATEYEV, A.V.; FEDOSEYEV, A.M.;
SHABADASH, B.I.; SHCHEDFIN, N.N.

Viktor Ivanovich Ivanov, 1900-1964; obituary. Izv. vys. ucheb.
zav.; energ. 8 no.1:122-123 Ja '65.

(MIRA 18:2)

VASIL'YEV, D.V.

Inertial detection of a random sequence of square pulses.

Izv. vys. ucheb. zav.; radiofiz. 3 no.6:1010-1021 '60. (MIRA 14:4)

1. Moskovskiy energeticheskiy institut.
(Radio detectors)

21174

S/141/60/003/006/013/025
E192/E382

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16.6100

AUTHOR: Vasil'yev, D.V.

TITLE: Inertia Detection of a Random Train of Rectangular
Pulses

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
Radiofizika, 1960, Vol. 3, No. 6, pp. 1010 - 1021

TEXT: The problem of the transfer of rectangular pulses of random duration and spacing through an inertia-type detector was considered by a number of authors (Refs. 1, 2, 3). So far, however, an exact solution of this problem has not been found. In the present work an attempt is made to give a general solution of the problem of the unidimensional distribution of the voltage at the output of the detector by determining some of the moments of this distribution for the steady-state regime. It is assumed that an infinite train of non-overlapping rectangular pulses is applied to a linear filter having an arbitrary RC load. The pulses have a constant amplitude and random and independent durations τ_1 and spacings τ_2 (Fig. 1). The probability density distribution

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functions $W_1(x)$ and $W_2(x)$ for the durations and spacings are known. The equivalent circuit of the detector can be represented as shown in Fig. 2. The charging period of the capacitance is expressed by:

$$\tau_3 = R_3 C \quad (1)$$

and its discharge time constant is given by:

$$\tau_p = RC \quad (2)$$

where $R_3 = R/(1 + SR)$, where S is the slope of the detector characteristic, R is the resistance of the detector load and C is the load capacitance. The instantaneous output voltage of the system shown in Fig. 2 can be expressed by:

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$$u(t) = \begin{cases} u_1(t) = 1 - (1 - U_{ni}) \exp\left(-\frac{t-t_{ni}}{\tau_p}\right); & t_{ni} \leq t \leq t_{ni+1} \\ u_2(t) = U_{ni} \exp\left(-\frac{t-t_{ni}}{\tau_p}\right); & t_{ni} \leq t \leq t_{ni+1} \end{cases} \quad (3)$$

at
where U_{Hi} and U_{Ki} are voltages across the load/the beginning and the termination of the i -th input pulse; t_{Hi} and t_{Ki} are the instants of the beginning and termination of the i -th input pulse. If A denotes the event that a randomly chosen time instant, t , coincides with the presence of a pulse or $u(t) = u_1(t)$ and B is the opposite event, i.e. $u(t) = u_2(t)$, the probability density distribution function for u can be written as:

$$W(u) = P(A) W'(u/A) + P(B) W''(u/B) \quad (4)$$

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where $P(A)$ and $P(B)$ are the probabilities of the events
A and B;

$W'(u)/A$ which will be denoted as $W'(u)$ and
 $W''(u)/B$ which will be denoted by $W''(u)$ represent conditional
probability density distributions of the voltages
 $u(t) = u_1(t)$ and $u(t) = u_2(t)$, respectively. From the
conditions of the problem it follows that:

$$P(A) = \frac{m_1(\tau_1)}{m_1(\tau_1) + m_1(\tau_2)}; \quad (5)$$

$$P(B) = \frac{m_1(\tau_2)}{m_1(\tau_1) + m_1(\tau_2)}; \quad (6)$$

where $m_1(\tau_1) = \overline{\tau_1}$, $m_1(\tau_2) = \overline{\tau_2}$ which represent average
values of the duration and spacing of the input pulses.

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Consequently, the problem consists basically of determining the conditional probabilities $W'(u)$ and $W''(u)$ when $W_1(x)$ and $W_2(x)$ are given. Now, Eq. (3) can be written in the following form:

$$u(t) = \begin{cases} u_1(t) = 1 - (1 - U_{n1}) \exp\left(-\frac{\Delta\tau_{11}}{\tau_1}\right) = 1 - (1 - U_{n1})\alpha_1; & t_{n1} \leq t \leq t_{n2} \\ u_2(t) = U_{n1} \exp\left(-\frac{\Delta\tau_{21}}{\tau_2}\right) = U_{n1} \beta_1; & t_{n1} \leq t \leq t_{n(l+1)} \end{cases} \quad (7)$$

where:

$$\alpha_1 = \exp\left(-\frac{\Delta\tau_{11}}{\tau_1}\right); \quad \tau_{11} = t_{n1} - t_{n1}; \quad (8)$$

$$\beta_1 = \exp\left(-\frac{\Delta\tau_{21}}{\tau_2}\right); \quad \tau_{21} = t_{n(l+1)} - t_{n1}, \quad (9)$$

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In these, Δ is a random quantity contained in an interval 0 to 1, which characterises the position of a random point t inside the interval τ_{1i} and τ_{2i} coinciding with it.

Clearly, the distribution of this quantity is constant and uniform and is given by:

$$W_{\Delta}(x) = \begin{cases} 1; & 0 \leq x < 1 \\ 0; & x < 0; 1 < x \end{cases} \quad (10)$$

It can be shown, therefore, that the conditional probability-density distributions are expressed by:

$$W'(u) = \int_{\tau_1}^{\tau_2} \int_{\Delta} \frac{\tau_1}{\tau_1} W_{\Delta} \left[1 - (1-u) \frac{1}{\alpha} \right] \frac{1}{\alpha} W_1(\tau_1) W_{\Delta}(\Delta) d\Delta d\tau_1; \quad (18)$$

$$W''(u) = \int_{\tau_1}^{\tau_2} \int_{\Delta} \frac{\tau_2}{\tau_2} W_{\Delta} \left(\frac{u}{\beta} \right) \frac{1}{\beta} W_2(\tau_2) W_{\Delta}(\Delta) d\Delta d\tau_2 \quad (19)$$

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On the basis of Eq.s (7) it can be shown that the n-th order moments for the functions $W'(u)$ and $W''(u)$ can be written in the form:

$$m_n(u_1) = \int_{U_H} \int_{U_K} \int_{\Delta} |1 - (1 - U_H)x|^n \frac{\tau_1}{\tau_1} W_n(U_H) W_1(\tau_1) W_\Delta(\Delta) d\Delta d\tau_1 dU_H; \quad (21)$$

$$m_n(u_2) = \int_{U_H} \int_{U_K} \int_{\Delta} [U_K \beta]^n \frac{\tau_2}{\tau_2} W_n(U_K) W_1(\tau_2) W_\Delta(\Delta) d\Delta d\tau_2 dU_K. \quad (22)$$

Since U_H is independent of α and U_K does not depend on β it is possible to carry out integration of the above with respect to U_H and U_K for any finite n . It is therefore possible to express $m_n(u_1)$ and $m_n(u_2)$ in terms of the moments of the distribution of the random quantities U_H and U_K , i.e. $m_n(U_H)$ and $m_n(U_K)$. The initial moment of the n-th order for U_K can be determined from:

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$$m_n(U_K) = m \left[(1 - a_m) + \sum_{k=1}^m (1 - a_{m-k}) \prod_{l=0}^{k-1} a_{m-l} b_{m-l} \right]. \quad (34) \quad (34)$$

where the coefficients a_i and b_i are defined by:

$$\frac{1 - U_{nI}}{1 - U_{nI}} = a_i; \quad (30)$$

$$\frac{U_{nI}}{U_{n(I-1)}} = b_i, \quad (31) .$$

The moments of the distribution $W_H(U_H)$ can be found from:

$$m_n(U_H) = m_n(U_K) m_n(b) \quad (37) .$$

From the above expressions it is comparatively easy to

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evaluate the first few moments for W_K and W_H . The moments of the distribution $W(u)$ for the output voltage are given by:

$$m_n(u) = \frac{\tau_1 m_n(u_1) + \tau_2 m_n(u_2)}{\bar{T}}, \quad (49)$$

where:

$$\bar{T} = \bar{\tau}_1 + \bar{\tau}_2 \quad (50)$$

In general, therefore, the moments $m_n(u)$ are determined by the functions $m_n(a)$ and $m_n(b)$ which depend on the input possibilities $W_1(x)$ and $W_2(x)$. All the remaining quantities which are included in the formulae depend on the detector parameters τ_1 and τ_p and the average values of the pulse duration and inter-pulse spacing. Exact formulae for calculating the moment $m_n(b)$ are given for the following distribution

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functions of the spacings τ_2 between the pulses: exponential distribution corresponding to an "absolutely random" train of pulses; a quasi-normal distribution; a uniform distribution and a gamma distribution. The pulses in the above cases are assumed to be of constant duration. The author expresses his gratitude to V.I. Tikhonov and V.L. Lebedev for reading the manuscript and for valuable advice. There are 3 figures and 6 references; 5 Soviet and 1 non-Soviet.

ASSOCIATION: Moskovskiy energeticheskiy institut
(Moscow Power Institute)

SUBMITTED: June 22, 1960

Card 10/10

SYROMYATNIKOV, I.A.; NEKRASOV, A.M.; LEBEDEV, A.A.; KOSTENKO, M.P.;
NEYMAN, L.R.; VASIL'YEV, D.V.; KAMENSKIY, M.D.; USOV, S.V.;
POSSE, A.V.; UL'YANOV, S.A.; FAZYLOV, Kh.P.

Professor N.N. Shchedrin; on his seventieth birthday and fortieth
anniversary of his educational work. Elektrichestvo no.1:94-
95 Ja '62. (MIRA 14:12)

(Shchedrin, Nikolai Nikolaevich, 1891-)

GUTKIN, L.S.; LEBEDEV, V.L.; SIFOROV, V.I.; Prinimali uchastiye:
VASIL'YEV, D.V.; SVISTOV, N.K.; LYUBIMOVA, T.M., red.;
BELYAYEVA, V.V., tekhn. red.

[Radio receiving devices] Radiopriemnye ustroistva. Pod
red. V.I.Siforova. Pt.2. 1963. 399 p. (MIRA 16:11)
(Radio--Receivers and reception)

GUTKIN, L.S.; LEBEDEV, V.L.; SIFOROV, V.I. Prinimali uchastiye:
VASIL'YEV, D.V.; SVISTOV, N.K.; LYUBIMOVA, T.M., red.;
BELYAYEVA, V.V., tekhn. red.

[Radio receiving devices] Radiopriemnye ustroistva. Pod
red. V.I.Siforova. Moskva, Sovetskoe radio. Pt.2. 1963.
399 p. (MIRA 17:2)

L 2967-66 EMT(d)/EMP(k)/EMP(1) JKT
ACCESSION NR: AP5026357

UR/0105/64/000/009/0093/0094

AUTHOR: Baliyev, V. K.; Grudinskiy, P. G.; Izyumov, N. M.; Kulebakin, V. S.;
Mirolyubov, N. N.; Sotakov, B. S.; Tairlin, A. D.; Alekseyev, A. Ye.;
Bogoroditskiy, N. P.; Berger, A. Ya.; Yavorskiy, V. N.; Nasledov, D. N.;
Vasil'yev, D. V.

28
27
B

TITLE: Nikolay Nikolayevich Lutsenko (Obituary)

SOURCE: Elektrichestvo, no. 9, 1964, 93-94

TOPIC TAGS: electric engineering personnel

ABSTRACT: Doctor of Technical Sciences, Major General in the Technical Engineering Service, Professor N. N. Lutsenko died in May of this year after a long and serious illness. He graduated from the Moscow Higher Technical Academy in 1914 and was closely associated with his specialty of electrical engineering till the end of his life. He spent the first years of his practical activity at the Academy working in the electrical engineering laboratory of K. A. Krug. After that he began his career in the Soviet Army as a lowly laboratory assistant in the radiotechnical laboratory and worked his way up over thirty years to be head of the

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ACCESSION NR: AP5026357

Department of Electrical and Military Engineering. He wrote several books: "Alternating Currents," "The Theory of Alternating Currents," "Course in General Electrical Engineering," "Radio Engineering" and, together with his co-workers, problem books on "A Course in Alternating Currents" and "The Physical Principles of Electrical Engineering." He set up a number of special courses (military application of electric power, military portable electric power stations, electric equipment for armies, electrification of military engineering works, etc.) and also participated in many engineering projects with the Soviet Army. He has written many textbooks, monographs and articles on the theoretical and applied divisions of military electrical engineering. These include "Electric Circuits" and "Fundamentals for the Design and Planning of Mobile Electric Stations." Many of N. N. Lutsenko's students are working in sections of the Soviet Army, in scientific institutes and in colleges, and in industry. These students are continuing the work of their teacher, the founder of Soviet military electrical engineering. He received his professorship in 1938 and his doctorate in 1949. He has received the Order of Lenin, three "Red Banners," the Order of the "Red Star" and many medals. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: KE

NO REF ROW: 000

OTHER: 000

JPRS

Card 2/2 *Lech*

VASIL'YEV, D. V.

VASIL'YEV, D. V.

Vasil'yev, D. V. defended his Doctor's dissertation in the Leningrad Polytechnic Institute im Kalinin, USSR, on 11 March 1946, for the academic degree of Doctor of Technical Sciences.

Dissertation: "Induction Synchronous-Tie Systems". Resume: A theoretical analysis of synchronous-tie induction systems, including establishment of criteria for applicability of diagrams constructed by Vasil'yev to single-phase selsyns.

Official Opponents: Profs. V. K. Popov, S. A. Press, and N. A. Livshits (all Doctors of Technical Sciences).

SO: Elektrichestvo, No. 7, Moscow, August 1953, pp 87-92 (W/29344, 16 Apr 54)

VASIL'YEV, D. V., Prof.

PA 51/49T106

USSR/Weapons
Artillery
Remote Control

Jul/Aug 49

"Letter to the Editor," Prof S. A. Press, Dr Tech Sci, Chair of Leningrad Ord of Red Banner Mil Mech Inst, Prof D. V. Vasil'yev, Dr Tech Sci, Chair of Leningrad Electrotech Inst Invent V. I. Ul'yanov, Docent B. I. Rubin, Cand Tech Sci, Chair of IKVIA, and Prof M. L. Tsukerman, Chair of Leningrad Inst of Precise Mech and Opt, 2 pp

"Avtomat i Telemekh" Vol X, No 4

Critical letter denounces M. A. Ayzerman and Ya. 51/49T105

USSR/Weapons

(Contd)

Jul/Aug 49

Z. Tsypkin's review ("Avtomatika i Telemekhanika," No 4, 1948) of V. A. Besekerskiy's book "Remote Control of Artillery Units."

51/49T106

YOSI L'ye V. D.V.
BOGORODITSKIY, N.P., Professor; VASIL'YEV, D.V., Professor; RAYDA, L.I.
dotsent; ODINTSOV, G.V., dotsent; SEMENKOVICH, A.A., dotsent; FATEYEV,
A.V., dotsent; YURGENSON, R.I., dotsent; ARANOVICH, B.I., starshiy
prepodavatel'; GEKTOR, D.S. starshiy prepodavatel'; POVOLOTSKIY, Ya.A.,
prepodavatel'.

Development of automatic control and telematics in the fifth
five-year plan. Avtom. i telem. 14 no. 2: 238-240 Mr-Ap '53.

(MLRA 10:3)
1. Leningradskiy elektrotekhnicheskiy institut im. V.I. Ul'yanova
(Lenina)

(Automatic control) (Remote control)

Vasil'yev, D.V.

KULEBAKIN, V.S.; ALEKSEYEV, A.Ye.; LARIONOV, A.N.; BOGORODITSKIY, N.P.;
CHILIKIN, M.G.; VASIL'YEV, D.V.; ODINTSOV, G.V.; PETROV, I.I.;
FATEYEV, A.V.; GOLOVAN, A.T.; MOROZOV, D.P.; BASHARIN, A.V.

S.A.Rinkevich. Elektrichestvo no.9:85 S'55. (MLRA 8:11)
(Rinkevich, Sergei Aleksandrovich, 1886-1955)

8(2)

PHASE I BOOK EXPLOITATION

SOV/2030

Vasil'yev, Dmitriy Vasil'yevich, Boris Afanas'yevich Mitrofanov, Grigoriy L'vovich Rabkin, Georgiy Nikanorovich Samokhvalov, Aleksandr Aleksandro-ich Semenkovich, Aleksandr Vasil'yevich Fateyev, and Nikolay Ivankovich Chicherin

Raschet sledyashchego privoda (Servodrive Design) Leningrad, Sudpromgiz, 1958.
370 p. 8,000 copies printed. Errata slip inserted.

Resp. Ed.: S. Ya. Berezin; Ed.: Ye. N. Shaurak; Tech. Ed.: P. S. Frumkin.

PURPOSE: This book is intended for scientists, engineers, and students of vuzes.

COVERAGE: This book discusses the problems of designing electromechanical servodrives and gives examples of design from the point of view of the overall system and of the individual basic elements. The design of servodrive amplifiers, the selection and design of error-sensing devices, and the experimental determination of the transfer functions of the discrete links of a servodrive are given considerable attention in the book. Materials on the design of electromechanical servodrives are systematized and the design of servodrives with electronic and magnetic amplifiers and of servodrives with rotating amplifiers is discussed. These designs reflect the practical experiences of the authors in the development of servosystems. The authors

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Servodrive Design (Cont.)

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thank I. A. Petrusenko, I. S. Rayner, N. M. Konovalova, L. A. Agarkova, and Yu. A. Yereneyev for their aid in preparing the book. There are 51 references: 47 Soviet, 1 German, and 3 English.

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- 7-5. Example of the design of a servodrive with magnetic and rotating amplifiers

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VASIL'YEV, D.V.
BOGORODITSKIY, N.P.; YERMOLIN, N.P.; FATEYEV, A.V.; VASIL'YEV, D.V.; ODINTSOV,
G.V.; GEKTOR, D.S.; APLAKSIN, B.A.

Professor V.A. Timofeev. Elektrichestvo no.2:96 # '58. (MIRA 11:2)
(Timofeev, Vladimir Andreevich, 1897-)

AUTHORS: Ivanov, V. I., Professor, Doctor of SOV/105-58-9-34/34
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of Technical Sciences

TITLE: Bibliography (Bibliografiya) K.V.Bulgakov: Power Supply
for Industry (K.V.Bulgakov: Energosnabzheniye promyshlennykh
predpriyatiy)

PERIODICAL: Elektrichestvo, 1958, Nr 9, pp 96 - 96 (USSR)

ABSTRACT: This is a review of a book published in 1957 by "Gosenergo-
izdat", 343 pp., 11,85 Roubles. Power supply
for industry is correctly described as a many-sided problem which
must be solved as a whole. The book is intended for the
engineer concerned with the design of power plants for
industry and with their operation, but may also
serve as a textbook for students working in this field.
It will be of particular value since at present there
is no other book on this subject. The book is on a high
scientific and theoretical level. The subject dealt

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Bibliography. K.V.Bulgakov: Power Supply for Industry SOV/105-58-9-34/34

with is scientifically arranged, it complies with the present state of power engineering, and is simply and lucidly written. Some minor imperfections, as the too small number of numerical examples and reference data, etc., could be easily removed with the next edition.

ASSOCIATION: Leningradskiy elektrotekhnicheskii institut im.V.I. Ul'yanova (Lenina)(Leningrad; Electrical Engineering Institute im.V.I.Ul'yanov (Lenin))

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USCOMM-DC-60.781

VASIL'YEV, Dmitriy Vasil'yevich; FILIPPOV, G.S.

[Fundamentals of the theory of servomechanisms] Osnovy
teorii rascheta slediashchikh sistem. Moskva, Gos. energ.
izd-vo, 1959. 428 p. (MIRA 15:3)
(Servomechanisms)

PHASE I BOOK EXPLOITATION

SOV/3707

Vasil'yev, Dmitriy Vasil'yevich, and Gleb Sergeyevich Filippov

Osnovy teorii i rascheta sledyashchikh sistem (Fundamentals of Theory and Design of Servosystems) Moscow, Gosenergoizdat, 1959. 428 p.
22,000 copies printed. Errata slip inserted.

Ed.: Yu. A. Sabinin; Tech. Ed.: Ye. M. Soboleva.

PURPOSE: This textbook was approved by the Ministry of Higher Education, USSR, for electrical engineering and power engineering schools of higher education. It may also be of use to engineers dealing with problems of automation.

COVERAGE: The authors present the fundamentals of theory and design of servo-systems both in a linear approximation and also with nonlinearities taken into account. Methods of improving the quality of servosystem performance are discussed, and typical circuit diagrams of servosystem used in engineering practice are presented. The book was written in accordance with the program of the course on servosystems at the Leningrad Electrical Engineering Institute imeni V.I. Ul'yanov (Lenin) for students of various specialties. The authors

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Fundamentals of Theory (Cont.)

SOV/3707

thank V.S. Levit, senior teacher, for his help. There are 37 references, all Soviet (8 of these are translations)

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VASIL'YEV, Dmitriy Vasil'yevich; FILIPPOV, Gleb Sergeyevich; SABININ,
Yu.A., red.; SOBOLEVA, Ye.M., tekhn.red.

[Theory and design fundamentals of servomechanisms] Osnovy
teorii i rascheta slediashchikh sistem. Moskva, Gos.energ.
izd-vo, 1959. 428 p. (MIRA 13:2)
(Servomechanisms)

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PHASE I BOOK EXPLOITATION

SOV/2979

Vasil'yev, Dmitriy Vasil'yevich, and Voislav Georgiyevich Chuich

Raschet sistem avtomaticheskogo upravleniya; zadachi i primery
(Design of Automatic Control Systems; Problems and Examples)
Moscow, Mashgiz, 1959. 390 p. Errata slip inserted.
10,000 copies printed.

Reviewer: A. V. Fateyev, Doctor of Technical Sciences, Professor;
Ed.: Yu. A. Sabinin, Candidate of Technical Sciences, Docent;
Eds. of Publishing House: G. A. Dudusova and N. Z. Simonovskiy;
Tech. Ed.: I. D. Nikolayeva; Managing Ed. for Literature on the
Design and Operation of Machinery (Leningrad Division, Mashgiz):
F. I. Fetisov, Engineer.

PURPOSE: This book is intended for technical personnel working in
automatic control. It may also be used by students of advanced
courses in schools of higher technical education.

Card 1/5

Design of Automatic Control Systems (Cont.)

SOV/2979

COVERAGE: The book deals with the application of the theory of automatic control and servomechanisms to the solution of practical problems in investigating and designing static and dynamic regimes of closed-loop automatic control systems. Construction of block and schematic diagrams, frequency characteristics, equations, and transfer functions of automatic control systems and servomechanisms are described. Considerable attention is given to the use of computers in research and design. Design calculations in sections 16 and 17 were made by Yu. N. Reshetnikov and Ye. M. Neplokhov. There are 35 references, all Soviet.

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VASIL'YEV, Dmitriy Vasil'yevich; CHUICH, Voislav Georgiyevich;
PATEYEV, A.V., prof., doktor tekhn.nauk, retsenzent; SABININ,
Yu.A., dotsent, kand.tekhn.nauk, red.; DUDUSOVA, G.A., red.
izd-va; SIMONOVSKIY, N.Z., red.izd-va; NIKOLAYEVA, I.D.,
tekhn.red.

[Calculation of automatic control systems; problems and examples]
Raschet sistem avtomaticheskogo upravleniya; zadachi i primery.
Moskva, Gos. nauchno-tekhn.izd-vo mashinostr.lit-ry, 1959. 390 p.
(MIRA 12:10)

(Electronic control)

(Servomechanisms)

VASIL'YEV, D.V.; MIKHAYLOV, V.A.; NORNEVSKIY, B.I.; DEMCHENKO, O.P.,
starshiy nauchnyy sotr., kand. tekhn. nauk, retsenzent;
MURATOV, I.I., dots., kand. tekhn. nauk, retsenzent;
REYNGOL'D, Yu.A., kand. tekhn. nauk, dots., retsenzent;
BAYKO, V.F., kand. tekhn. nauk, dots., nauchnyy red.; KLIMINA,
Ye.V., red.; KRYAKOVA, D.M., tekhn. red.

[Automatic control systems for ships] Sudovye avtomatizirovan-
nye ustanovki. Leningrad, Gos. soiuзное izd-vo sudostroit. pro-
myshl., 1961. 595 p. (MIRA 15:2)
(Marine engineering) (Automatic control)

VASIL'YEV, D.V., doktor tekhn. nauk, prof., zaslužennyy (syatel';
TARATIN, A.P., inzh.

Synthesis of a system of mutually coupled channels of a heavy
copying and milling machine. Izv. LETI no.47:220-260 '62.
(MIRA 16:12)

ALEKSEYEV, A.Ye.; BASHARIN, A.V.; BOGORODITSKIY, N.P.; VASIL'YEV, D.V.;
IVANOV, V.I.; LYUTER, R.A.; MANOYLOV, V.Ye.; YERMOLIN, N.P.;
FRAMKE, A.V.

Vladimir Tikhonovich Kas'ianov; on the seventy-fifth anniversary
of his birth and the tenth anniversary of his death.
Elektrichestvo no.4:95 Ap '62. (MIRA 15:5)
(Kas'ianov, Vladimir Tikhonovich, 1887-1952)

VASIL'YEV, D.V.; BESSEKERSKIY, V.A.; NEYMAN, L.R.; PIVOVAROV, S.P.;
POLONSKIY, V.I.; FATEYEV, A.V.

Professor Arkadii Timofeevich Blazhkin, 1904 - ; on his 60th
birthday and the 35th anniversary of his scientific and
educational work. Elektrichestvo no.4:94 Ap '64. (MIRA 17:4)

BEREZNIKOVSKIY Sergey Fedorovich, dots., kand. tekhn. nauk;
BESKERSKIY, V.A., doktor tekhn.nauk, retse"zent;
VASIL'YEV, D.V., doktor tekhn. nauk, retsenzent;
BLAZHKIN, A.T., prof., red.; KVOCHKINA, G.P., red.

[Automatic regulation and control of electrical machines;
some theory problems and elements of control systems] Av-
tomaticheskoe regulirovanie i upravlenie elektricheskimi
mashinami; nekotorye voprosy teorii i elementy sistem up-
ravleniia. Leningrad, Sudostroenie, 1964. 418 p.
(MIRA 17:9)

L 23557-65

Design and construction of a servomechanism and a discrete sledyashenikn
system), Leningrad, Iza-vo "Sudostroyeniye", 1964, 606 n. illus., biblio.
10,900 copies printed.

TIPIC TAGG. servomechanism, electronic, discrete, sledyashenikn, amplifier

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Monograph

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Vasil'yev, Dmitriy Vasil'yevich; Mikhaylov, Vladimir Aleksandrovich; Nornevskiy, Boris Ivanovich

Automation of ship equipment (Avtomatizatsiya sudovykh ustanovok) 2d ed., rev. and enl. Leningrad, Izd-vo "Sudostroyeniye", 1965. 607 p. illus., biblio. 3500 copies printed. Textbook for institutions of higher technical education

TOPIC TAGS: shipborne automatic control system, linear control system, nonlinear control system, electric motor

PURPOSE AND COVERAGE: This book is based on the course "Electrical equipment and automation of ships" conducted at the Leningrad Electrotechnical Institute im. V. I. Ul'yanova. This textbook is intended for use in the above-mentioned course in schools of higher technical education; it may also be used by engineers designing new automated marine plants and by manufacturing workers. The book deals with elements and control systems of automated ship installations. The theoretical fundamentals of automatic control are also considered, along with linearized systems and problems of the theory of nonlinear systems. Fundamentals of the statistical dynamics method of systems with automatic control are discussed.

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